

In Vivo and In Vitro Genetic Evidence of Involvement of Neuregulin 1 in Immune System

Dysregulation

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Table 1 Mean values of autoantibodies and cytokine levels observed in plasma of 14 families informative for the *NRG1* Val (G) > Leu (T) mutation

Antigen	G/G	T carriers
Anti-nuclear	2.5±0.6	2.3±0.7
Beta-2 Glycoprotein	18.8±30.2	15.7±11.7
Complement Factor 1q	7.7±3.6	8.1±6.6
Centromere Protein B	2.5±0.8	2.3±0.7
Collagen Type 1	125.5±108.7	134.1±131.1
Collagen Type 2	4.6±2.6	4.7±4.8
Collagen Type 4	1.8±0.1	1.7±0.3
Collagen Type 6	6.3±3.1	7.1±6.2
Cytochrome P450	4.3±2.2	5.3±5.7
Double Stranded DNA	3.6±1.1	4.7±4.2
HSC-70	2.2±0.5	2.2±1.2
HSP-32	3.1±0.7	3.0±0.7
HSP-65	11.6±11.0	11.9±11.9
HSP-71	3.0±1.0	2.9±1.6
HSP-90 alpha	9.4±4.7	7.7±9.5
HSP-90 beta	19.6±14.6	14.6±10.0
Histone	4.3±1.2	3.3±1.0
Histone H1	3.8±1.1	3.2±1.2
Histone H2A	7.1±5.1	5.3±1.8
Histone H2B	7.8±16.0	3.3±1.3
Histone H3	5.4±1.9	4.3±2.2
Histone H4	2.5±0.4	2.3±0.5
Insulin	3.1±1.0	2.8±0.7
JO-1	1.7±0.2	1.7±0.3
Mitochondrial	2.7±0.7	2.7±0.9
Myeloperoxidase	3.2±1.3	2.9±0.8
PCNA	2.5±0.7	3.1±2.7
PM-1	2.0±0.3	1.9±0.4
Proteinase 3	4.6±1.4	4.0±1.1
RNP	2.7±0.4	2.6±0.6
RNP-A	8.8±7.5	8.7±8.6
RNP-C	7.8±2.9	7.4±3.7
Ribosomal P	2.1±0.4	2.0±0.4
Scleroderma 70	20.3±35.7	6.6±3.0
Smith	2.6±0.6	2.4±0.5
SSA	1.6±0.2	2.0±2.7
SSB	2.5±0.4	2.3±0.4
Thyroglobulin	1.9±0.2	3.1±3.6
Thyroid microsomal	7.9±4.5	7.9±7.0
T3	1.9±0.4	1.8±0.5
T4	0.9±0.1	0.9±0.2
IL12p70	4.5±0.5	4.6±0.6
TNF	4.8±0.3	4.9±0.7
IL10	5.5±0.5	5.5±0.6
IL6	7.4±1.0	8.0±2.4
IL1b	8.4±1.3	8.5±1.6
IL8	72.6±42.7	79.4±76.9

N=14 and 31 for G/G and T allele carriers, respectively. All values are expressed in pg/ml. Cytokine levels were measured in plasma using a validated cytometric bead array system (BD Biosciences). Autoantibody levels were measured in plasma using a validated multiplex immunoassay developed by Rules Based Medicine (www.rulesbasedmedicine.com).